

CATCH-22 & FREE RADICALS

WHAT YOU DON'T KNOW CAN HURT YOU...



According to the free radical theory of aging, your body wears out in the same way that metal rusts—through oxidation. That is why the medical world has been abuzz, in recent years, about substances known as “anti-oxidants.”

Moreover, says the theory, the culprits behind the scene—the ones who set the oxidation process off in the first place—thereby helping skin to wrinkle, cancers to be spawned, and maybe even Alzheimer’s disease to form: these are called “free radicals.”

Enter the catch-22: Even though these mysterious little rogues may cause a landslide of internal harm...*if there were no free radicals being generated at all in your body, you would be dead.*

What we know (or think we know)

The atomic theory says that all matter is composed of atoms—and atoms are composed of a nucleus that is orbited by electrons. Normally all is well, and the atoms go sailing along trouble-free...but sometimes they lose or gain an electron and are thrown off balance. When that happens they become atomic thieves; they have become free radicals. *From that point on, their main objective is to regain their balance.*

Free radicals become stable by stealing an electron from another atom, thereby setting off a chain reaction of losing and stealing that can be incredibly destructive at the cellular level. This is the essence of the free radical theory. *The degree of damage done depends upon the duration of the chain and the types of atoms affected.*

If an electron is stolen from a molecule that is part of a piece of glucose dissolved in your bloodstream, for instance, there may be no real damage at all. If the stolen electron makes up a section of your skin, it will

cause you to age a little more. But if the electron is part of a molecule that makes up the DNA of a cell, it could cause the cell to mutate...*perhaps increasing the risk of cancer, Parkinson’s, or other serious disease.*

The scary part is that this free radical raid on your body is unpredictable. It’s like dropping golf balls from an airplane: one ball falling to earth will probably land without harming anyone. Open the bays of a cargo plane full of golf balls, though, and the chances of serious damage raining down from the sky becomes much more likely.

Probability alone, then, tells us that a *primary means of limiting the damage that free radicals inflict upon your body is to reduce the number of free radicals in your body.*

What can limit free radicals?

Consider the primary sources of free radicals. There is no consensus and no universal maxim in play here, but this list cites ten generally recognized events that are believed to increase free radicals:



- Exposure to sunlight (an everyday form of radiation)
- Exposure to X-rays from medical procedures
- Environmental pollution
- Food preservatives and pesticides
- Smoking
- Drinking alcohol
- Eating fried foods
- Stress
- Breathing
- Metabolism

Some of these free radical producers are matters of choice, *but many of the sources are not only difficult to avoid, they are necessary.*

Consider metabolism, for instance—the conversion of food into energy. Your body must consume food in order to live, but like the exhaust fumes that occur when you fire up your car engine, free radicals are the necessary result of your body's fueling process.

Nature's own remedy

Nature, of course, has supplied us with the perfect guardian against free radical proliferation: antioxidants. Certain vitamins and minerals serve like traffic police to interrupt the free radical chain reaction, thereby helping maintain an internal balance between the necessary and the harmful.

The catch here is that *antioxidants sacrifice themselves in the process.* When an antioxidant is robbed of an

electron, it ceases to be an antioxidant. It has stopped the production of free radicals, *but it can only stop one chain.* As soon as another free radical goes on the prowl for an electron, another antioxidant has to be called into action.

This means that the amount of antioxidants in your body is constantly being used up. Since the production of free radicals does not cease, *you must maintain a sufficient supply of antioxidants to keep the free radicals from taking over.*

What is the solution?

Your body is designed to absorb the nutrients that contain antioxidants *from the plants you eat.* Plants get their nutrients from the soil, but you probably don't eat much soil... and, even if you did, your system can't directly access the precious antioxidants there.

The problem is that most of us don't get a sufficient amount of plant-based foods... a problem that is compounded by the worldwide depletion of fertile soil. *When the soil loses nutrients...you lose nutrients.*

For many years now, humans have turned to vitamin and mineral supplements to maintain health. But therein is another dilemma: *The supplements you take may not be doing their job. They may even be making the situation worse.*

What is wrong with most supplements?

Most manufacturers of nutritional supplements source their minerals directly from the soil or from other non-plant sources. But these minerals are not absorbable by humans. In order for absorption to occur, a substance has



to be in solution. That is why there is a substantial amount of acid in the stomach...*but absorption does not happen in the stomach.* Absorption happens in the small intestine.

Research shows that the form of minerals used by most vitamin and mineral companies (gluconates, sulfates, oxides, and fumarates) crystallize shortly after arriving in the small intestine. Remember, though: *In their crystallized forms, your body cannot absorb these minerals.*

Worse than that, when minerals crystallize they throw off an explosion of free radicals...*thereby increasing your level of free radicals rather than diminishing them.* When it comes to nutrition, science...not an attractive label on the bottle...is the most important factor to consider. It's not a good deal if it doesn't work.

The smart approach

Considering the evidence, it appears the best approach to protecting your body from free radicals is two-fold:

First, cut back on the sources of free radicals...

- Avoid alcohol and tobacco.
- Use sun screen to protect your skin.
- Avoid pesticides and preservatives.
- Eat more plant-derived foods and fewer fried foods.
- Help curb environmental pollution.
- Deal with excessive stress in your life—prayer, meditation, and exercise are essential for that.

Next, deliberately eat foods that are rich in antioxidants—whole grains, soy, black and green teas, tomatoes, broccoli, berries, garlic, and spinach are all rich sources.

And if you want to be sure that you are truly getting the antioxidants you need, then supplement your diet with the best vitamin and mineral supplements you can find. Seek highest quality, rather than simply the lowest price.

Aim for balance: Eat smart, be smart, and choose the wellness path. You are needed in this world. *Do your best to look out for your number one asset: You.*

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